

DATE: November 5, 2020

FID: 445031180

TO: Victoria Nelson and Alexandra Letuchy, EPA – Region 5

FROM: Ronald Binzley, Wisconsin DNR

SUBJECT: Modification of Power Boiler B11 authorized by construction permit 99-SDD-109

Background

- On July 2, 1999, the Thilmany Mill in Kaukauna, Wisconsin submitted an application to Wisconsin DNR for an air pollution control construction permit to install two new condensate tanks to the existing Low Volume High Concentration (LVHC) gas control system. The department logged the application under construction permit no. 99-SDD-109 and subsequently issued the permit on September 13, 1999.
- The non-condensable gases (NCG) from the LVHC system are vented and combusted in the Lime Kiln (P12) with the no. 11 power boiler (B11) as a backup. Because of the increase in NCG flow from the LVHC system, the condensate tank project resulted in an increase in actual emissions of SO₂ from P12 and B11.
- The increase in SO₂ emissions due to the project exceeded PSD thresholds. However, because no physical changes were made to either P12 or B11 to accommodate the increase in NCGs combusted, there were no PSD BACT requirements for either unit.
- As discussed in the preliminary determination for operation permit 445031180-P10 for the Thilmany Mill, the increase of NCG flow to B11 represented a modification of that unit as defined under s. NR 400.02(99), Wis. Adm. Code. Because B11 was modified by the condensate tank project it was thus modified after April 1, 1972 and particulate matter emissions from the boiler became subject to the 0.10 pounds of particulate matter per million Btu heat input limit per NR 415.06(2)(c), Wis. Adm. Code.

Appropriate SO₂ Emissions Limit for B11 under chapter NR 417, Wis. Adm. Code

EPA Region 5 has asked the department to explain why the applicable SO₂ emission limit for Boiler B11 under chapter NR 417 of the Wisconsin Administrative Code did not change as a result of the modification in 1999.

The applicable SO₂ emission limit for Boiler B11 did not change due to the modification because chapter NR 417 does not list modification of an existing unit as an action that would trigger more stringent limitations. S. NR 417.07(2) enumerates emission limitations for various existing direct sources of SO₂ emissions. As a steam generating unit or other fuel burning equipment firing solid fossil fuel at a facility which has a total heat input capacity on solid fossil fuel of greater than 250 million Btu per hour, Boiler B11 is subject to s. NR 417.07(2)(a), which limits SO₂ from any stack to no more than 3.2 pounds of sulfur dioxide per million Btu heat input. In the 1980s, as allowed under s. NR 417.07(5), the mill applied for and the department approved an alternative SO₂ emission limit for this boiler. The modification in 1999 did not alter the applicable chapter NR 417 emission limitation – the alternative limit authorized under s. NR 417.07(5) – because the chapter makes no mention of different emission limitations being triggered by modification of an existing unit.